

User Group Board of Directors Meeting

Agenda

March 06, 2008 L104

9:00	<i>Larry Cardman</i>	Status of plans for last years for 6 GeV running
9:30	<i>Tony Thomas</i>	Outlook for physics and budget
10:00	<i>All UGBoD</i>	Status of Thesis Prize Evaluation
10:15	<i>Ron Gilman</i>	APS Satellite Meetings
10:30	<i>Gordon Cates</i>	Lessons from APS Public Policy Committee
11:00	<i>Christoph Leemann</i>	Lab Outlook: budget, etc
		<u>Working lunch</u>
12:00	<i>Javier Gomez</i>	Hall A report
12:30	<i>Volker Burkert</i>	Hall B report
13:00	<i>Steve Wood</i>	Hall C report
13:30	<i>Rolf Ent</i>	12 GeV
14:00	<i>Yuhong Zhang</i>	ELIC design update
14:30	<i>All UGBOD</i>	area reports
	<i>Aidan Kelleher</i>	UGM poster session proposed standard
	<i>Karl Slifer</i>	Feedback Update
	<i>Latifa Elouadrhiri</i>	Women in Physics
	<i>Ed Brash</i>	Computing
	<i>etc.</i>	etc.
15:30	<i>Ron Gilman</i>	Assignments for Users Group Meeting
16:00	<i>all</i>	Other Business
16:30		End of Meeting

Present: G. Cates, L. Elouadrhiri, R. Gilman, A. Kelleher, W. Melnitchouk, K. Slifer, D. Tedeschi, L. Weinstein

Unable to make the meeting: T Averett, E. Brash

Minutes

Larry Cardman:

The planning process is operating under several assumptions:

1. Budgets are the proposed president's budget for FY09 with inflation increases for the out years.
2. The 12 GeV project goes forward as currently planned, with a 6 month down starting May 2011 for the helium transfer line to Hall D connection, etc, and the 1 year down starting in May 2012.

This leaves about 4 years of 6 GeV beam operations, at the 30-32 week / year (80%) effort agreed upon with DOE. Looking at recent lab budgets, this is consistent with planning budgets, but given the past few years, perhaps optimistic compared to what we would likely expect.

The laboratory meeting with DOE in Germantown concerning the last years results and this years planning also assumed the FY09 president's budget, and FY10 and 11 with inflation increases. Typically Christoph Leemann and Tony Thomas talk with DOE, with the accelerator and physics division associate directors providing occasional input. This meeting is not a science plan, but a spreadsheet of where money goes. Also note for Congress the important thing is how many weeks do we run the accelerator vs optimum utilization - the limit on how much we could run independent of money. Optimum is 41 weeks, our goal is $0.8 \times 41 \sim 32$.

The short-term schedule assumes the FY09 president's budget. Given recent history, a short continuing resolution (CR) is expected. Depending on what happens and guidance from DOE, the early CY 2009 schedule could be affected.

The long term schedule is complicated, particularly during the last two years, by the Qweak beam and helium requirements. At present it appears limiting Qweak to 150 μ A allows programs to run in parallel in Halls A and B, but not high power cryotarget experiments in Hall A.

PAC 33 was the last 6 GeV PAC, but recall that during the 12 GeV era experiments have trivial access to 2.2, 4.4, 6.6 GeV beams, though in competition with 12 GeV experiments. Of course, with Hall D at 12 GeV, one of Halls A, B, C can get 11 GeV, while the second of the three that is running has to get 2.2, 4.4, 6.6, or 8.8 GeV. Given the results of the recent long range plan, the 12 GeV budget is probably among the safest things in nuclear physics.

After the PAC, the current queues in the Halls are

- Hall A: 21 experiments (12 rated A or A-) needing 5.5 years,

- Hall B: 19 experiments (15 rated A or A-) needing 5.8 years, and
- Hall C 10 experiments (8 rated A or A-) needing 5.9 years.

The backlogs are at 80% of optimal running, assuming we run as well as in the past. At this point in the scheduling process, there are fewer than 10 experiments that would not be scheduled.

With some experiments rated C3 by PAC 33 (experiments requiring few resources to run if they can be fit), and significant downtimes planned, the lab expects to be able to do better than the standard 2.2 - 2.4 multiplicity, so we expect to be able to do larger fraction of the experiments than previously anticipated **if** we get the budget. The higher multiplicity arises in part from taking a longer term view of schedule than usual, and scheduling together more experiments that fit together.

The process has involved looking through halls by priority, readiness to run, and putting things together that run together. In Hall C, there is little flexibility: Qweak runs at the end and SANE at beginning, and there is time to fit in g_{1d} and HKS.

Halls A and B are laid out to maximize the science. A draft of the schedule is shown with names of experiments removed. Day by day scheduling of beam energy and polarizations remains. Multiplicity is up from 2.2 to 2.7 or 2.8. Note that in the past weeks were 168 hour weeks. Now we use an OMB definition that 1 week of running is 1 week of accelerator operations, which includes setup etc, so old weeks are about 85-90% of the new weeks. The plan for running in FY08, etc, has 24, 34, 35, 30, and 27 weeks; each year would be 3-4 weeks less by the old definition.

The end result is that most of the science program will be accomplished.

The plan to finalize the schedule is as follows. Finish the plan in 1-2 months. Have an open meeting at the lab. Send the plan out to the PAC, and get advice back. Publish the schedule, and present it at the summer users meeting. There are no more jeopardy reviews.

Remember the caveats: carrying out the schedule depends on the full FY09 budget + constant effort funding. It requires various capital equipment funding that is in the assumed budgets. There is substantial additional apparatus funding. It is essential to inform DOE, the NP community, and Congress of the value of the 6 GeV program.

The Board encourages Hall leaders to involve their users in the scheduling process.

Tony Thomas:

In addition to Larry's comments, it is important to encourage the users to consider getting publications into more popular journals, beyond Physical Review, such as Science, Nature, Physics Today, or newspapers; this is important.

The 6 GeV budget has going down last 5 years. We were caught in a bad budget in FY06, then CRs. On a good budget note, in the ongoing two-year Virginia budget process there is a civil construction contribution to 12 GeV, mostly in FY10. It is currently 3.7 M in the VA senate and 6 M in the VA house.

Tony is asked whether, given the Fermilab and SLAC rotating furloughs and potential layoffs, whether the lack of JLab layoffs is a problem. He thinks it is not, since high energy physics (HEP) had a major cut. The problem in HEP was that no clear science case exists for the requested budget - there is no CD0 for the ILC, for example. The cut to ITER was a last minute effort. The Office of NP makes clear what are science opportunities.

It seems likely that Orbach will leave office soon, given the upcoming change in the administration, and although Orbach is widely respected in Congress. But since Orbach's position is now an undersecretary, higher than in the past, a new person in the next administration will likely be appointed sooner in the transition process.

The laboratory is struggling for procurements and capital this year. At the beginning of the year, we still had 3M carry forward, but there will be none left in October. If there is a CR, tentative schedule for next year likely gets impacted after March.

Ron Gilman: Thesis Prize

To finish the thesis prize evaluations on time, the board needs to finish the first round evaluations by March 15. All board members are encouraged to finish ASAP.

Ron Gilman: APS satellite meeting

We have a Users Group Satellite Meeting scheduled for the APS St. Louis April Spring Meeting. The satellite meeting is Sunday, April 13, 3:30-5:00 PM in Director's Row 27. Food and beverages will be served.

Gordon Cates: APS Public Policy Committee meeting.

Actual policy positions and papers are done by the Panel on Public Affairs (POPA). The Public Policy Committee meeting is mostly concerned with budgets and lobbyists.

The Presidential Science Adviser, J Marburger, talked mostly on the proposed budget supplement. The supplement must go in "clean", essentially only for the military needs. If it is not clean, it opens the floodgates to large additional spending. Discussions taking place about what to add. The White House wants some science money, but it cannot be new money - there must be offsets. Adding to one area requires subtracting from another. There is an idea of not putting money into the strategic oil reserve since oil prices are high.

The default in commitments to ITER has been brought up in non-science international negotiations, and C. Rice has spoken to president about ITER. It is probably the top choice for science. There is also support for the ACI / America Competes act. This was also mentioned in the most recent state of the union address. This is a good opportunity to educate people on the hill.

Science staffers from the offices of Senators Bingaman and Alexander spoke. They warned that they are authorizers, not appropriators. They mentioned that President Bush himself added science to the state of union address, since it was not in the speech writers draft. It is good that the president cares about science, but bad that apparently staffers do not share his priorities. It is thought that the president's interest arose from the vice president, who was pushed by industry concerns.

The recommendation is that the important first step is to get anything into the supplement, since once something is in, then the exact number can be argued about later. People should pay attention to interests of members and find out who / what they care about. There is a really strong push for 300 M to restore ITER, repair HEP, and this might lead to some more money for others, like us. It would establish a better baseline for any FY09 CR.

Mike Holland from OMB gave an interesting, opinionated talk. He said we need to explain why physics is relevant. He suggested we should talk to political science people at our institutions and quantify our positive impact. He talked about moving aspects of nuclear science into nuclear physics, to give it more obvious practical impact, and not just have basic research.

Christoph Leemann:

The lab NP base budget was 79.5 M in FY07. It increases to 79.8 in FY08, vs the presidential budget request of 87.8 M. Including 12 GeV, the FY07 budget of 89.1 M increased to 94.2 M in FY08, vs the presidential budget request of 102.3 M. The decrease of lattice QCD support from 0.5 M in FY07 to 0.1 M in FY08 was planned, as equipment purchases are now being directed to other labs. The SciDAC FY07 budget of 0.3 M decreased to 0.18 M, vs the budget request of 0.36 M. The FY06 budget was about 8 M lower than the FY07 budget.

Some highlights: the carryover is small, CD-3 for 12 GeV is on schedule, there are 24 weeks of beam time, 6 GeV hardening is continuing, but there are reduced capital equipment expenditures.

The FY09 request for the lab includes 117.1 M from NP, 2.4 M from HEP for ILC / high current linac research, 1.4 M for safety and security, 0.6 M from BER for the detector group, and 3.7 M Project Engineering and Development (PED) funds for infrastructure, for the new TEDF building (see below). The 79.8 M fy08 base NP appropriation goes to 88.5 M for 6 GeV operations in the FY09 PB.

The next Lehman review is late July '08. We expect approval for CD3 in the 4th quarter of FY08, allowing the start of construction.

Wally Melnitchouk asks about the effect of Lia Merminga departing on our ELIC efforts. She is widely respected, and the credibility of our technical case without her is hurt. Christoph reminds us that while Lia led the effort, she was not the only person there. But also the design ideas, if good, could be implemented anywhere, not just at JLab.

Building ELIC at JLab requires additional space, likely impinging on the bus depot next to the lab. The lab is approaching the mayor of Newport News. It is good that this is a big construction project for the city, but bad in that it is many years away, not in the next few years.

Wally also notes that one sees lots of EIC activity at BNL, but very little at JLab. The website is at BNL, and spokespeople are there. We need to have someone focus efforts here and raise visibility.

The reason for this is that JLab wanted to focus on 12 GeV efforts. It did not want to detract from the impression that 12 GeV is our highest goal. Also BNL sees a need for a new project on an earlier time scale than JLab, and had a more mature design sooner taking advantage of the existing RHIC ring.

Long term, DOE plans to have PED funds for FRIB no sooner than 2011, and construction not before 2013. JLab is working with ANL on the FRIB accelerator linac. There is no current work with Michigan State, but it is possible.

The Technical Engineering and Development Facility (TEDF) is a ~70 M building, to allow up to date experiment preparation space, SRF work for the laboratory and for work for other laboratories (FRIB, ILC, ...), provide office space for engineers and designers, etc. The first 3.7 M in PED funds comes next year. CD0 for the project was approved during 2007.

Javier Gomez:

In the next few months, Hall A runs E04-007 (threshold n^0 production) and E08-007 (low Q^2 proton form factors) before the summer '08 shutdown.

In FY09, the transversity and d_2 experiments run during fall 2008. The remainder of the polarized ^3He program runs in spring 2009.

Among the parity violation experiments in Hall A, E05-108 (HAPPEX-III) and E08-011 (PVDIS) run in late 2009, while E06-002 (PREX) runs in spring 2010.

For the long term schedule, in parallel with Qweak, there is concern in Hall A about the uncertainties in the consequences of running Qweak in Hall C on operations in

the other Halls. Slight differences in beam energy and cryo requirements have large impact on Hall A experiments through the available beam polarization and limits on the luminosity and equipment that can be used.

Volker Burkert:

The Hall B program has three parts, the N^* program, the low energy DVCS/SIDIS program, and the fundamental symmetries program (PRIMEX and 2γ).

The firm 2008 schedule includes the g_{12} and e_1 -DVCS experiments. In 2009, Hall B is thinking of a year of eg_6 and eg_1 -dvcs running. There is an issue here of the beam polarization in Hall B when HAPPEX-III is running in Hall A. Volker is concerned about the possibility of A rated experiments being severely impacted by an A- rated parity experiment that requires longitudinal polarization. Right now the estimate is that the Hall B experiments get $\sim 70\%$ or maximum polarization, rather than the usual $\sim 90+\%$.

Larry comments that the lab typically has not distinguished between the priorities of A and A- experiments, and that we have given the parity experiments longitudinal beam polarization to largely remove any effects of transverse polarization asymmetries.

The g_{9b} FROST target experiments are expected to run in 2010; these provide the first comprehensive set of polarization observables that allow the pion photoproduction amplitudes to be uniquely determined.

The g_{14} HD-ICE target run is expected in 2010/11; this provides hydrogen data but also deuterium data so that one has the neutron and proton polarized targets.

In 2011, the ET1 (transverse polarized HD-ICE target) experiments run if possible. If not, the nuclear ρ production experiment runs.

In 2011/12, two unpolarized experiments run: PRIMEX-II and the eg_5 2γ exchange.

Steve Wood:

Experiment 04-019, $G_{Ep}-2\gamma$, has been running recently. E07-002, WACS, was delayed in running, as a leak was repaired in the beam line. It ended up running during the Hall B extension to the beam time. expected uncertainties were shown for both experiments, and for the G_{Ep} -III that will run this spring.

This summer SANE gets installed to run this fall. The g_{1d} experiment is expected to run in early 2009, with the semi-SANE parasitically getting its deuteron data.

The Hypernuclear spectroscopy experiment runs in 2009, but it seems unlikely that the two PAC33 C3 hypernuclear runs can fit in.

Afterward, there are 2.5 years for Qweak. The Qweak magnet will be tested this spring and fall at Bates.

Work is also continuing on the 12 GeV upgrade in Hall C. Recent experience with the higher radiation sensitivity of modern electronics has in part led to an improved electronics shield house now planned for SHMS.

Rolf Ent:

CD-2 fixes the scope, cost and schedule of the 12 GeV upgrade. For CD-3, we are now required to finish design to 100%. Monthly "earned value" evaluations are in progress. CD-3 allows us to request construction funds.

In late July, there will be a Lehman review before CD-3.

The CD-4a accelerator milestone is planned for Dec 2014, and allows funds to be requested for ops of Hall A before the other Halls are complete. Hall A commissioning starts 10/13. The CD-4b milestone is when all the Halls are complete.

To get CD-3, there are several requirements:

1. Finish all technical elements, ideally before the Lehman review. Lots of detector elements are coming in towards the end, mostly in Halls B and D. Intermediate results are needed by July, which indicate completion is possible before CD-3.
2. Need to finish all design for FY09 procurements, but it is okay if we are at 80% for later procurements. Copying existing designs gets us to 80%.
3. Need to close out earlier review recommendations. Six left; all are expected to be finished in time. Of particular interest to the users, 3 DOE reviewers cover the 100 M scope of all the halls in 1 day. They have about 1 hour to hear from Hall A, and 2 hours for each of the other Halls. To make their job easier, several pre-reviews will be done in advance, to give them.
4. We need a checkout, testing, and commissioning plan.
5. We need to develop MOU's on the contributed scope.

Rolf comments on communication issues, a long standing problem, on the issue of scope contingency, and on the process that led up to CD-2.

Yuhong Zhang:

Yuhong Zhang presents the ELIC design. The 12 GeV CEBAF is the electron injector to ELIC; there is a separate proton injector. The proton beam emittance is kept small with electron cooling. Also, The proton beam is injected into the electron ring for acceleration to its final energy. The CEBAF 12 GeV program can run at the same time as ELIC.

In the recent past, CASA has been working to make the ELIC design more robust, since the luminosity is already much higher than in the BNL design. CASA is committed to continuing to improve on this, with a number of planned projects in the next few years. The ELIC design is more expensive than the BNL eRHIC design, but has ~1000 times luminosity. Also, the BNL design has been moving towards more cutting edge, less robust technology, as it appears their design luminosity is not sufficient. Note however it is not yet clear if the physics requirements on the luminosity require the estimated ELIC luminosity.

Aidan Kelleher:

The board discusses the proposed evaluation standards for the annual meeting graduate student poster competition evaluation. The important point is that the committee considers the poster, the student's presentation to the committee, and the total impression, with relative weights of 40%-40%-20%.

Karl Slifer:

The board discusses feedback from the users using the new web page: http://www.jlab.org/user_resources/usergroup/board/feedback.html. There were comments on the PAC, quality of life (basketball and pool), email, and F wing.

Larry notes that we delayed the next PAC from the summer until January mainly to avoid interfering with CD-3. Various proposals for new experiments require that the next PAC occur by January. After that, he is willing to consider either winter or summer PACs, if the users have a strong preference. The board decides to poll the Users Group, starting at the summer meeting.

User issues with F wing include noise and temperature. It seems that we could possibly use more small conference rooms, since they are often in use, and more sound proofing in F wing.

The email issues were discussed in the computing report.

Given the current funding levels, the board is concerned with supporting quality of life improvements that require a lot of money, such as a pool, but we should attempt to see what modest improvements we can attempt to pursue with JSA Initiatives funds in the coming year.

Latifa Elouadrhiri:

Feb 26 there was a meeting of the lab committee on women in physics. Several actions are underway.

1. A workshop in May, inviting all JLab women, to provide mentoring for women graduate students and postdocs. Ron suggests requesting JSA Initiatives funds in future years so minimize the cost of the meeting to participants.
2. Having a session or talk at the annual users meeting.

3. Work with Jan Tyler to identify women SULI students coming this summer
4. Consider a Woman Physicist prize or possibly summer support for women undergrads to do research at JLab.
5. Look into the issue of day care. Nothing came of an earlier effort in this regard; probably it awaits a new director. But DOE has agreed that the lab can use overhead funds for this.

E. Brash:

Ed is unable to attend the meeting due to work at CNU, but sent a note to Ron on computing issues. 1) Budget reduction are delaying the release of CODA 3, trigger rate improvements, and limiting HelpDesk hours. Hopefully this has relatively little impact on the program; people with complaints should complain. 2) Email has been an issue recently, that required drastic fixes with basically no notice when the system became unstable. It is thought to be improved a lot now. 3) The farm linux is being upgraded, with some suggestions about possible other distributions. Some old LQCD nodes will be used to speed up ifarm. 4) Roy Whitney would like time at the Users Meeting to talk with the users and get feedback. 5) VRVS is apparently dead, and a new conferencing system EVO is being investigated.

R. Gilman:

Ron brings up several issues.

The JSA Fellowship was a hard and close decision due to the excellent quality of the candidates. Do we want to change anything for next time? The consensus of the board was that using the stated evaluation criteria (record of accomplishment, planned physics program, and promise for future research) provides an excellent basis for evaluating the candidates, and that meeting as we did to discuss the candidates and decide the outcome was very helpful.

The nominating committee for the next election is JP Chen, Michel Guidal, and Dave Mack. They have been charged to provide us with 3 at large candidates, plus candidates for the vice-chair, postdoc, and graduate student positions. They have further been requested to provide us with a diverse group of candidates.

Plans are being developed for the upcoming user meeting. We have money from JSA to cover graduate student registrations, graduate student lunches, and travel for the thesis prize and postdoctoral fellowship winners.

We expect to have talks from the thesis prize winner and the postdoc fellowship winner. We will attempt to start a new tradition of honoring our new APS fellows by inviting them to give talks. We have suggestions about having people talk about QCD at other labs around the world. We will have talks from the funding agency. One morning will be devoted to talks from the lab - the business meeting, the 6 GeV scheduling, a computing talk, and a feedback session. We are planning on an

ELIC session. We also now have a suggestion concerning women in physics. Ron will soon assign topics to people and ask them to start inviting speakers.